UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,465	02/04/2004	Kenji Ogasawara	325772034000	1347

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EXAMINER
MILIA, MARK R

ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/770,465	OGASAWARA, KENJI
	Examiner	Art Unit	
	Mark R. Milia	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 April 2009*.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1,3-6,8-11 and 13-15* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,3-6,8-11 and 13-15* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's amendment was received on 4/16/09 and has been entered and
made of record. Currently, claims 1, 3-6, 8-11, and 13-15 are pending.

Claim Rejections - 35 USC § 101

2.   Applicant's amendment to claims 1, 6, and 11, have overcome the rejection set
forth in the previous Office Action as it "ties" the claims to a particular machine or
apparatus. Therefore the rejection has been withdrawn.

Response to Arguments

3.   Applicant's arguments filed 4/16/09 have been fully considered but they are not
persuasive.

Applicant asserts that Murahashi (US 5,864,652) fails to disclose a "judging unit,
executed by the processor, configured to monitor an operating status of said processing
unit to judge whether said operating status satisfies a predetermined compression
process execution condition ... wherein the judging unit is configured to judge said
compression process execution condition as being satisfied when said processor is not

executing any of a plurality of predetermined processes or is executing a predetermined

combination of one or more processes selected from said plurality of predetermined

processes, said plurality of predetermined processes comprising spooling image data,

rasterizing spooled image data, printing, compressing image data, and expanding

image data.", because Murahashi's system initiates compression of data based on

whether spooling or other similar processes have already been executed and not based

on what processes the processor 14 is executing. The examiner respectfully disagrees

as Murahashi does disclose such a feature. Particularly, Murahashi states that the

initial printing of the image data is carried out in parallel with the compression of the

same image data, this is performed on a per scan line basis (column 6 lines 23-61).

Murahashi further states that CPU **2** monitors received data to be printed and judges

whether sufficient print instruction data has been received, essentially one page, and if

sufficient print instruction data is received then CPU **1** is informed and initializes the

compression/expansion processor **50** (column 6 lines 4-15). The print instruction data

is data that has been received from a host device and stored in input buffer **20** of

memory array **22**, which is analogous to spooling the data, and when CPU **2** receives

the print instruction data it parses the data to generate, on a pixel-by-pixel basis, print

image data and stores this data in page memory **38** of memory array **36** (column 5 line

44-column6 line 3). After receiving sufficient print data and upon initialization, one scan

line at a time is processed to be printed and compressed and stored, the printing and

compression and storage being performed simultaneously. Murahashi further states

that one scan line of print data from the image memory 38 and writes the scan line of

print image data to the page save FIFO 48 and to the video output FIFO 42

simultaneously. As soon as the print image data is written into the page save FIFO 48,

the compression/expansion processor 50 reads (step 136) the page save FIFO 48 and

compresses the scan line of print image data. The compressed print image data is

stored by the compression/expansion processor 50 in the page image buffer 54 of the

memory array 22. At the same time, the scan line of print image data is also read (step

138) from the video output FIFO 42 and transferred to the print engine 12. One scan

line of pixels is then scanned by the laser onto the electrophotographic drum of the print

engine 12 in accordance with the received scan line of print image data. Because the

page save FIFO 48, the compression/expansion processor 50 and the memory array 22

communicate over the bus 17 which is separate from the bus 46 coupling the video

output FIFO 42 to the print engine 12, the compression/expansion processor 50 can

read the print image data from the page save FIFO 48, compress the data and store the

compressed data in the memory array 22 while the video DMA 40 simultaneously

transfers the uncompressed print image data from the separate FIFO 42 to the print

engine 12 for printing, without the two parallel processes interfering with each other

(column 6 lines 24-50). Thus, Murahashi shows that a compression process execution

condition is met when predetermined processes are executed, the processes being

spooling image data, rasterizing spooled image data, and printing of the image data,

which is what is recited in the currently amended claims 1, 6, and 11.

Therefore the rejection of claims 1, 3-6, 8-11, and 13-15 is maintained.

Claim Rejections - 35 USC § 103

4.   The text of those sections of Title 35, U.S. Code not included in this action can
be found in a prior Office action.

        Claims 1, 3-6, 8-11, and 13-15 are rejected under 35 U.S.C. 103(a) as being
unpatentable over Murahashi (US 5,864,652).

        Regarding claims 1, 6, and 11, Murahashi discloses an image processing device,
method, and program comprising: a processing unit, executed by a processor,
configured to process image data (see Figs. 1 **14** and column 3 line 55-column 4 line 10
and column 6 lines 5-15), a judging unit, executed by the processor, configured to
monitor an operating status of said processing unit to judge whether said operating
status satisfies a predetermined compression process execution condition (see column
5 lines 6-43 and column 6 lines 4-15 and 24-61, Murahashi states that CPU**2** monitors
received data to be printed and judges whether sufficient print instruction data has been
received, essentially one page, and if sufficient print instruction data is received then
CPU**1** is informed and initializes the compression/expansion processor **50**), a
compression unit, executed by the processor, configured to compress image data
processed by said processing unit when said judging unit judges that operating status of
said processing unit satisfies said compression process execution condition (see
column 5 lines 6-43 and column 6 lines 4-61, compression/expansion processor **50**),
wherein said judging unit is configured to judge said compression process execution
condition as being satisfied when said processor is not executing any of a plurality of

predetermined processes or is executing a predetermined combination of one or more

processes selected from said plurality of predetermined processes, said plurality of

predetermined processes comprising spooling image data, rasterizing spooled image

data, printing, compressing image data, and expanding image data (see column 6 lines

4-61, Murahashi states that CPU**2** monitors received data to be printed and judges

whether sufficient print instruction data has been received, essentially one page, and if

sufficient print instruction data is received then CPU**1** is informed and initializes the

compression/expansion processor **50**. The print instruction data is data that has been

received from a host device and stored in input buffer **20** of memory array **22**, which is

analogous to spooling the data, and when CPU**2** received the print instruction data it

parses the data to generate, on a pixel-by-pixel basis, print image data and stores this

data in page memory **38** of memory array **36**. After receiving sufficient print data and

upon initialization, one scan line at a time is processed to be printed and compressed

and stored, the printing and compression and storage being performed simultaneously.

Thus, Murahashi shows that a compression process execution condition is met when

predetermined processes are executed, the processes being spooling image data,

rasterizing spooled image data, and printing of the image data).

     Murahashi does not disclose expressly a <u>single processor</u> that comprises a

processing unit and a compression unit.

     However, Murahashi discloses that microcomputer system **14** contains a CPU**1**

for compression and storage of data and CPU**2** for processing image data. Therefore

the processing unit and compression unit are contained within a single microcomputer

which is analogous to the claimed limitation as it serves the same purpose and function.

Further, the newly added limitations fail to render the instant invention patentably

distinct over the prior art (Murahashi), as it is merely a case of making integral, and at

the time of the invention, it would have been obvious to a person of ordinary skill in the

art to combine the **CPU1** and **CPU2** into a single processor because it would be more

cost efficient to manufacture and reduce the amount of space need for the processing to

be performed. See *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

Regarding claims 3, 8, and 13, Murahashi further discloses a memory unit

configured to store image data compressed by said compression unit (see Fig. 1 and

column 7 lines 6-18), and an expansion unit configured to expand image data stored in

said memory unit when reprocessing image data by means of said processing unit (see

column 7 lines 19-61 and column 8 lines 10-16), wherein said processing unit

reprocesses the image data expanded by said expansion unit (see column7 lines 19-

61).

Regarding claims 4, 9, and 14, Murahashi further discloses a spooling unit

configured to spool image data (see column 9 lines 28-33), a rasterizing unit configured

to rasterize image data spooled by said spooling unit (see column 9 lines 33-36), and an

image forming unit configured to image-form the image data rasterized by said

rasterizing unit (see column 9 lines 40-66).

Regarding claims 5, 10 , and 15, Murahashi further discloses a spooling unit

configured to spool image data (see column 9 lines 28-33), a rasterizing unit configured

to rasterize image data spooled by said spooling unit (see column 9 lines 33-36), and a

transmitting unit configured to transmit the image data rasterized by said rasterizing unit

(see column9 lines 40-66).

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Mark R. Milia whose telephone number is (571)272-

7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David Moore can be reached at (571) 272-7437. The fax number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark R. Milia
Examiner
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